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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/434,985	11/05/1999	IONEL JITARU	1675B.1A.1	4609

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EXAMINER

MAI, ANH T

ART UNIT

PAPER NUMBER

2832

DATE MAILED: 02/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/434,985

Applicant(s)
Jitaru

Examiner
Anh Mai

Art Unit
2832

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Jan 16, 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☒ Claim(s) 24-28 is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All b) ☐ Some* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- *See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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DETAILED ACTION

Response to Amendment

1. The numbering of claims is not accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 20-23 and 24-32 have been renumbered 16-28.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371© of this title before the invention thereof by the applicant for patent.

3. Claim 24 is rejected under 35 U.S.C. 102(e) as being anticipated by Levin.

Levin discloses: a multi layer printed circuit board having multiple layers of dielectric sheets 23, a core 20 extending through layers of dielectric sheets, a set of electrically conductive windings 24, at least one of said winding of said set winding contained between two adjoining layers of said dielectric sheets [figures 4-9], one electrically conductive trace 25 communicating

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with one of said set of electrically conductive windings and totally contained between two adjoining layers of said dielectric sheets.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 25 and 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Levin in view of Godek.

Levin discloses the instant claimed invention except for an active element secured to the printed circuit board. Godek discloses a printed circuit board wherein active element 26 attached. It would have been obvious to a person of ordinary skill in the art to have an active element to provide conductive circuit [col 4, lines 7-21; figures 1-4] as taught by Godek to Levin for the reason above.

6. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Levin in view of Godek as applied to claim 24 above, and further in view of Cassese et al. [US 5949191].

Levin and Godek disclose the instant claimed invention except for a heat sink connected to multi layer circuit board. Casesse discloses a heat sink 1 as base layer of the circuit layer 2 [figure 1]. It would have been obvious to a person of ordinary skill in the art to have a heat sink as taught by Casesse to Levin in view of Godek. The motivation would have been to cool the

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planar circuit. Therefore, it would have been obvious to combine Casesse with Levin in view of Godek.

Response to Arguments

7. Applicant's arguments with respect to claims 1-28 have been considered but are moot due to misnumbering the claims of preamendments filed on January 27, 2000 and May 30, 2000.

Allowable Subject Matter

8. Claims 1-23 are allowed.

The following is an examiner's statement of reasons for allowance:

Claim 1 recites, inter alia, *a second transformer having a first core extending through said layers of dielectric sheets and a first set of electrically conductive windings at least one of said windings of said first set of electrically conductive windings contained between two adjoining layers of said dielectric sheets.*

Claim 10 recites, inter alia, *a first shielding layer disposed on the first exterior surface of said multi layer printed circuit board, and first shielding layer being disposed adjacent to and on one side of said first set of winding.*

Claim 16 recites, inter alia, *an output choke having a second core extending through said layers of dielectric sheets and second set of electrically conductive windings, at least one of said windings of said second set of electrically conductive windings containing between two adjoining layers of said dielectric sheets.*

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Claim 18 recites, inter alia, *a second magnetic element having a second core extending through said layers of dielectric sheets and a second set of electrically conductive windings contained between two adjoining layers of said dielectric sheets.*

The references of record do not teach or suggest the aforementioned limitation, nor would it be obvious to modify those references to include such limitation.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anh Mai whose telephone number is (703) 308-2900.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist of the Technology Center whose telephone number is (703) 308-0956. The facsimile numbers for Technology Center 2800 are (703) 308-7722, (703) 308-7724, (703) 308-1341.



Anh Mai

Primay Examiner, AU 2832

February 7, 2002